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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/533,741	03/23/2000	Thomas M. D'Angelo	P-3009.2	1020

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EXAMINER
STAICOVICI, STEFAN

ART UNIT	PAPER NUMBER
1732	3

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Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Applicati n No. 09/533,741	Applicant(s) THOMAS M. D'ANGELO	
	Examiner Stefan Staicovici	Art Unit 1732	

-- The MAILING DATE f this communicati n appears on th c ver sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disp sition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 March 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because form and legal phraseology often used in patent claims, *i.e.*, "said," (see line 2) should be avoided. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In claim 1, lines 3-4, Applicant claims "die blocks defining mold halves including planar end segments having differing geometry", whereas on lines 10-12, the resulting molded product is claimed as "one or more parts having *planar end segments of the same* or differing geometry in each part or with differing geometry from part to part" (emphasis added). It is unclear what is the claimed process by which end molds having "differing geometry" can mold a product having ends of "the same geometry". Since Applicant has claimed a plurality of resulting molded end segment geometries, for the purpose of examination it has been assumed that the

resulting molded product has "planar end segments of differing geometry in each part or with differing geometry from part to part" Further clarification is required.

Claims 2-16 are rejected as dependent claims.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2, 5, 8-11 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, lines 2-3, the limitation of "defining a different end connection on opposite ends" is unclear as to whether Applicant is referring that the ends are "different" as related to their position or to their geometry. It should be noted that for the purpose of examination it has been assumed that the ends have a different geometry. Claims 8-10 are rejected as dependent claims. Further clarification is required.

In claims 5, 8, 11 and 14, the limitation of "mold halves are configured with identical geometry" is unclear since the resulting pattern exhibits a different geometry claimed as "A-B-C". It should be noted that for the purpose of examination it has been assumed that the mold halves have differing geometries. Further clarification is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-2, 4-5, 7-8, 10, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maroschak (US Patent No. 3,859,025) in view of Lupke (US Patent No. 5,429,398).

Maroschak ('025) teaches the basic claimed process for continuously molding corrugated parts including, providing an extruded soft tube of thermoplastic material and a plurality of die blocks (31a, 31b) defining mold halves (32, 33), advancing said soft extruded tube zone in a blow-molding machine (30) where said plurality of die blocks (31a, 31b) continuously form an intermediate corrugated portion (body) (intermediate convoluted segments) between non-corrugated portions (collar) (planar end segments), advances the thus shaped tube using a speed controller (40) (synchronizing the cutter action to the movement of the shaped column) (col. 4, lines 46-53) to a cutting station (60) to separate the molded parts having non-corrugated portions (collar) (planar end segments) adjacent an intermediate corrugated portion (body) (intermediate convoluted segments) (see col. 2, line 66 through col. 4, line 10 and Figure 2).

Regarding claims 1-2, Maroschak ('025) does not teach forming end segments having different geometries. Lupke ('398) teaches a process for continuously forming a ribbed tube (convoluted) including a ribbed portion (10) and end segments (112, 114) having a differing geometry by using a plurality of die blocks of differing geometries (52, 52a, 52b) (see Figure 9) in a continuous blow molding machine (50) (col. 5, lines 44-50). Therefore, it would have been obvious for one of ordinary skill in the art to have provided die blocks having differing

geometries as taught by Lupke ('398) to form end segments of a differing geometry in the process of Maroschak ('025), because Lupke ('398) specifically teaches that such end segments reduce the complexity of the joining process of the resulting tubes, hence improving product quality and also because both references teach similar processes and end-products.

In regard to claim 4, Maroschak ('025) teaches the existence of vertical wall (83) which is removed during the cutting phase (a surface thereon between end segment surfaces thereon) in which a speed controller (40) is adapted to synchronize the movement of the resulting molded product with the delivery rate as it emerges from the molding zone (col. 4, lines 45-50 and col. 6, lines 55-65).

Specifically regarding claims 5, 8 and 14, Lupke ('398) teaches that the geometry of die blocks (52) (52a) and (52b) form the differing geometry (10), (112) and (114), hence forming an A-B-C pattern. Therefore, it would have been obvious for one of ordinary skill in the art to have provided die blocks having differing geometries as taught by Lupke ('398) to form a molded product having an A-B-C pattern in the process of Maroschak ('025), because Lupke ('398) specifically teaches that such end segments reduce the complexity of the joining process of the resulting tubes, hence improving product quality.

Regarding claims 7, 10 and 16, Maroschak ('025) teaches the use of a thermoplastic material (col. 3, line 1). It is submitted that a thermoplastic material includes a thermoplastic polyolefin and a thermoplastic elastomer.

8. Claims 3, 6, 9, 11-12, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maroschak (US Patent No. 3,859,025) in view of Lupke (US Patent No. 5,429,398) and in further view of Rosenbaum (US Patent No. 4,509, 911).

Maroschak ('025) in view of Lupke ('398) teaches the basic claimed process as described above.

Regarding claim 3, Maroschak ('025) in view of Lupke ('398) does not each that the end segments differ from part to part. Rosenbaum ('911) teaches a process for continuously forming a tube including, providing an extruded soft tube of plastic material and a plurality of die blocks (82, 84), advancing said soft extruded tube zone in a blow-molding machine (80) where said plurality of die blocks (82, 84) continuously form a tube having different geometries from part to part (A, B, C, D) (see col. 3, lines 1-2) and, cutting said formed tube. Further, it should be noted that Rosenbaum ('911) teaches that its teachings can be incorporated in a process that forms a coupling structure as an integral part of the tubing (col. 1, lines 15-20). Therefore, it would have been obvious for one of ordinary skill in the art to have formed end segments that differ from part to part as taught by Rosenbaum ('911) in the process of Maroschak ('025) in view of Lupke ('398) because, Rosenbaum ('911) specifically teaches that it can be incorporated in a process that forms a coupling structure as an integral part of the tubing as the process of Maroschak ('025) in view of Lupke ('398) and also because, process versatility improves by reducing the complexity of the joining process of the resulting tubes to a large geometrical variety of tubes. Further, it should be noted that all references teach similar materials and processes.

In regard to claims 6, 9, 11-12 and 15, Maroschak ('025) teaches continuously molding an extruded plastic tube using a plurality of die blocks to result in an $(A\text{-}B)_n$ pattern. Lupke ('398) teaches continuously molding an extruded plastic tube using a plurality of die blocks to result in an $(A\text{-}B\text{-}C)_n$ pattern. Rosenbaum ('911) teaches continuously molding an extruded plastic tube using a plurality of die blocks to result in an $(A\text{-}B\text{-}C\text{-}D)_n$ pattern, in which A, B, C and D have different geometries (see col. 3, lines 1-2). Therefore, it is submitted that the art of record as a whole teaches a wide variety of differing geometries that can be continuously molded from an extruded plastic tube using a plurality of die blocks and as such it is submitted that Rosenbaum ('911) teaches molding an extruded plastic tube using a plurality of die blocks to result in an $(A\text{-}B\text{-}C)_n$ and an $(A\text{-}B\text{-}C\text{-}C'\text{-}B\text{-}A)_n$ pattern. Therefore, it would have been obvious for one of ordinary skill in the art to have molded an extruded plastic tube using a plurality of die blocks to result in an $(A\text{-}B\text{-}C)_n$ or an $(A\text{-}B\text{-}C\text{-}C'\text{-}B\text{-}A)_n$ pattern as taught by Rosenbaum ('911) in the process of Maroschak ('025) in view of Lupke ('398) because, Rosenbaum ('911) specifically teaches that it can be incorporated in a process that forms a coupling structure as an integral part of the tubing as the process of Maroschak ('025) in view of Lupke ('398) and also because, process versatility improves by reducing the complexity of the joining process of the resulting tubes to a large geometrical variety of tubes. Further, it should be noted that all references teach similar materials and processes.

Specifically regarding claim 13, Maroschak ('025) teaches the use of a thermoplastic material (col. 3, line 1). It is submitted that a thermoplastic material includes a thermoplastic polyolefin and a thermoplastic elastomer.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (703) 305-0396. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM and alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jan H. Silbaugh, can be reached at (703) 308-3829. The fax phone number for this Group is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Stefan Staicovici, PhD

Stefan Staicovici
2/23/02

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February 23, 2002